

EXAMPLES ATTACHMENT



2002

INTRODUCTION:

These are examples of the 2002 CAD Guidelines. They are intended as a visual aid, and do not cover everything in the 2002 CAD Guidelines. The Consultant should not substitute anything in this file for a requirement of the CAD guidelines.

This file will be updated as more examples are made available. The Consultant should check the revised date on the website to make sure they have the current files.

SHEET BORDERS

Sheet Border’s available to download on the District’s internet site.

NAME

Cover-sht-FCD.dgn
GenNotes-sht-FCD.dgn
Legend-sht-FCD.dgn
PL-FCD.dgn
PP-FCD.dgn
PP-FCD60.dgn
PP-FCD40.dgn
PR-FCD.dgn
PS-FCD.dgn
QS-FCD.dgn

DESCRIPTION AND USE

The Cover sheet for all projects
The General Notes Sheet. Should be modified as needed.
The Legend Sheet. Should be modified as needed. Should include all symbols used in the project.
Plan View Only Border @ 1”=100’
Plan and Profile Border @ 1”=100’. Should be used for all plan and profile sheets @ 5, 10, 20, 50 and 100 scales
Plan and Profile Border @ 1”=60’. Should be used for all plan and profile sheets @ 30 and 60 scales
Plan and Profile Border @ 1”=40’. Should be used for all plan and profile sheets @ 40 scale.
Full Grid Border @1”=100’
Pipe Summary Sheet. Itemized list of pipe’s used for bidding and construction. Should be modified as needed.
Quantity Summary Sheet. Itemized list of quantities used for bidding and construction. Should be modified as needed.

For Title Block information and text point information see the next sheet.

SYSTEM DOWNLOADS

MicroStation system files available to download on the District’s internet site.


NAME

FCD2D.cel
FCD3D.cel
FCDColor.tbl
FCDPlot.plt
FCDColor.plt
FCDSeed3d.dgn
FCDFont.rsc
FCDLines.rsc

DESCRIPTION AND USE

The District’s 2-Dimensional Cell Library
The District’s 3-Dimensional Cell Library.
The District’s Color Table
The District’s black and white plot driver
The District’s color plot driver
The District’s 3-Dimensional seed file
The District’s font library
The District’s line style library

TITLE BLOCK INFORMATION

3			
2			
1			
NO.	REVISION	BY	DATE
<div> FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION</div>			
PROJECT NAME ①			
PROJECT NUMBER			
CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION ⑤		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
③			
DRAWING NO.	PLAN AND PROFILE	SHEET OF	

- ① Modify Project Name, PCN Number, and Contract Number
- ② The Consultant Designer's initials and date Drafter initials and date and Checker's initial's and date
- ③ Consultant Logo
- ④ Drawing Category and Number
- ⑤ Preliminary or PE stamp

<input type="checkbox"/> REMOVE <input type="checkbox"/>	
①	
<input type="radio"/> CONSTRUCT <input type="radio"/>	
②	
③	④
⑫ Construct Concrete Mow Curb See Detail D5	200 CY ⑤

① Itemized list of removal items and quantities for this sheet.
Text Points are color coded see definitions on this sheet
Text points are set so that when FCD font 36 is used it will line up with appropriate text.

② Itemized list of construction items and quantities for this sheet.
Text Points are color coded see definitions on this sheet
Text points are set so that when FCD font 35 is used it will line up with appropriate text.

③ Construction Symbol Number.
Text Point on screen is color 2. Size=15.0 @100 Scale and LB justification
Font=35 for construction symbol only.
See text point description below.

④ Description of Construction Item.
Text Point on screen is color 2. Size=15.0 @100 Scale and LB justification
Font=34. See text point description below.

⑤ Quantity Information.
Text Point on screen is color 12. Size=15.0 @100 Scale and RB justification
Font=34. See text point description below.

TEXT POINT DESCRIPTIONS

POINT COLOR	FONT SIZE @ 100 SCALE; AND JUSTIFICATION
COLOR 0	11.0; LB
COLOR 1	12.5; LB
COLOR 2	15.0; LB
COLOR 3	17.5; LB
COLOR 4	12.5; CC
COLOR 6	15.0; CC
COLOR 8	17.5; CC
COLOR 9	12.5; RB
COLOR 12	15.0; RB

Text points are found in most downloaded sheet boards.
It is not required that the Consultant use the text points
They are color coded snap points that line up text easily and properly.
They do not work as text nodes; they will not adjust text parameter's automatically.
Text points will be visable in the dgn file but will not plot.

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY	
ISSUED FOR PUBLIC BIDDING BY:	
CHIEF ENGINEER AND GENERAL MANAGER	
BOARD OF DIRECTORS OF THE FLOOD CONTROL DISTRICT	
ANDY KUNASEK - CHAIRMAN	
DISTRICT 1	FULTON BROCK ①
DISTRICT 2	DON STAPLEY
DISTRICT 3	ANDY KUNASEK
DISTRICT 4	MAX WILSON
DISTRICT 5	MARY ROSE WILCOX

① Show current Board of Director's of The Flood Control District



FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

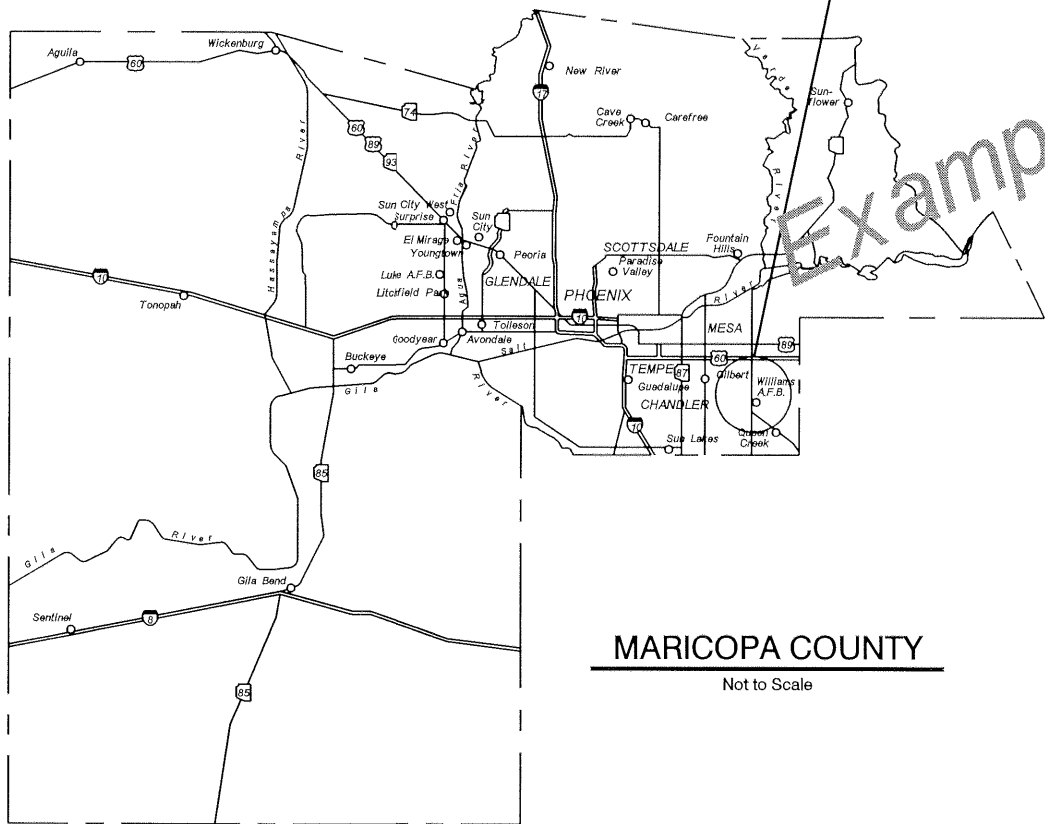
IN COOPERATION WITH (USE WITH IGA's ONLY)
PLANS FOR THE CONSTRUCTION OF

PROJECT NAME

PCN XXX.XX.XX

FCD CONTRACT NO. XX-XX

PROJECT LOCATION



MARICOPA COUNTY

Not to Scale

VICINITY MAP

Not to Scale

FLOOD CONTROL DISTRICT OF MARICOPA COUNTY

ISSUED FOR PUBLIC BIDDING BY:

CHIEF ENGINEER AND
GENERAL MANAGER

BOARD OF DIRECTORS OF
THE FLOOD CONTROL DISTRICT

ANDY KUNASEK - CHAIRMAN

DISTRICT 1	FULTON BROCK
DISTRICT 2	DON STAPLEY
DISTRICT 3	ANDY KUNASEK
DISTRICT 4	MAX WILSON
DISTRICT 5	MARY ROSE WILCOX

STRUCTURAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO MAG STANDARDS DETAILS, SPECIFICATIONS, DATED 1998, INCLUDING ALL REVISIONS THRU 1998
2. DESIGN IS IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION 1 15TH EDITION, 1992.
3. REINFORCING STEEL SHALL CONFORM TO ASTM SPECIFICATION A615 GRADE(FILL IN)
4. STRESSES - f_s (FILL IN)PSI - GRADE(FILL IN) REINFORCING STEEL.
5. ALL REINFORCING STEEL PLACEMENT DIMENSIONS SHALL BE TO THE CENTER OF BARS UNLESS OTHERWISE NOTED.
6. ALL REINFORCING STEEL SHALL HAVE 2" CLEAR COVER UNLESS OTHERWISE NOTED
7. STRUCTURAL STEEL SHALL CONFORM TO ASTM SPECIFICATION A36.
8. ALL WELDING SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICAN WELDING SOCIETY, STRUCTURAL WELDING CODE, REVISION 1996
9. DIMENSIONS SHALL NOT BE SCALED FROM DRAWING
10. CHAMFER ALL EXPOSED CONRNNERS 3/4" UNLESS OTHERWISE NOTED
11. CONCRETE COMPRESSIVE STRENGTH SHALL (FILL IN) PSI MAG, UNLESS OTHERWISE NOTED

UTILITY NOTIFICATION

PHONE NO.	COMPANY	CONTACT
XXX	XXX	XXX

INDEX OF SHEETS

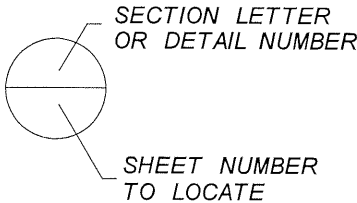
ABBREVIATIONS

CSTR	CONSTRUCTION
DESC	DESCRIPTION
EQ	EQUAL
FOC	FIBRE OPTIC CABLE
OP	OVERHEAD ELECTRIC
PG	PAGE
P/L	PROPERTY LINE
P	PLATE CENTERLINE
PRV	PRIVATE
SPG	SPACING
UGT	UNDERGROUND TELE CABLE
TW	TOP OF WALL
TN	TOP OF NUT

DRAWING NO.	TITLE	SHEET NO.
G1	COVER SHEET & VICINITY MAP	1
G2	GENERAL NOTES & INDEX OF SHEETS	2
G3	LEGEND SHEET	3
GX-X	GEOMETRIC LAYOUT	X-X
GX-X	TYPICAL SECTIONS	X-X
QS	QUANTITY SUMMARY	X-X
PS	ALTERNATE PIPE SUMMARY	X-X
D	DETAIL SHEETS	X-X
C	CIVIL/CONSTRUCTION SHEETS	X-X
SD	STORM DRAIN SHEETS	X-X
CP	CONNECTOR PIPE SHEETS	X-X
W	WATERLINE SHEETS	X-X
S	SANITARY SEWER SHEETS	X-X
ST	STRUCTURE SHEETS	X-X
B	BRIDGE SHEETS	X-X
LS	LANDSCAPING SHEETS	X-X
IR	IRRIGATION SHEETS	X-X
SB	SOIL BORING SHEETS	X-X
XS	CROSS SECTION SHEETS	X-X


GENERAL NOTES

1. ALL CONSTRUCTION TO BE PERFORMED ACCORDING TO APPLICABLE MAG STANDARD DETAILS AND MAG SPECIFICATIONS, DATED 1998 AND THROUGH 2002 AND THE CITY OF (fill in)
2. FACILITIES WHICH ARE NOT SPECIFICALLY LOCATED WITH ACTUAL HORIZONTAL AND VERTICAL CONTROLS ARE APPROXIMATE AND TO THE BEST AVAILABLE INFORMATION.
3. EXISTING UTILITIES AND OTHER FACILITIES HAVE BEEN PLACE ON THE PLANS FROM FIELD SURVEYS, EXISTING MAPS AND OTHER CURRENT PLANS WITHIN THE AREA OF THIS PROJECT. THE CONTRACTOR WILL DETERMINE THE EXACT LOCATION AND/OR ELEVATION OF EXISTING UTILITIES WHICH PERTAIN TO AND AFFECT THE CONSTRUCTION OF THIS PROJECT.
4. TWO (2) WORKING DAYS PRIOR TO EXCAVATING, THE CONTRACTOR SHALL CALL FOR BLUE STAKES AT THE BLUE STAKE CENTER CENTER (PHONE: 1800-STAKEIT)
5. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO CONSTRUCTION
6. THE FLOOD CONTROL DISTRICT OF CITY OF (fill in) IS NOT RESPONSIBLE FOR LIABILITY ACCRUED DUE TO DELAYS AND/OR DAMAGE TO UTILITIES IN CONJUNCTION WITH THIS CONSTRUCTION
7. ANY WORK PERFORMED WITHOUT THE APPROVAL OF THE FLOOD CONTROL DISTRICT AND/OR THE ENGINEER THE ENGINEER AND ALL WORK AND MATERIALS NOT IN CONFORMANCE WITH THE SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE
8. THE ENGINEER WILL DETERMINE THE NUMBER AND LOCATION OF THE REQUIRED COMPACTION TESTS FOR STRUCTURAL BACKFILL
9. TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH MAG SPECIFICATION 401, PART VI OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (1988 EDITION) INCLUDING REVISION 3 DATED SEPTEMBER 3, 1993)
10. CONTRACTOR SHALL REPLACE PAVEMENT TO THE EXISTING GRADES SHOWN ON THE PLANS
11. EXACT POINT OF MATCHING TERMINATION AND OVERLAY WILL BE DETERMINED IN THE FIELD BY THE ENGINEER
12. NO JOB WILL BE CONSIDERED COMPLETED UNTIL CURBS, PAVEMENT AND SIDEWALKS HAVE BEEN SWEEPED CLEAN OF ALL DIRT AND DEBRIS
13. PRIOR TO FINAL APPROVAL AND ACCEPTANCE OF THE WORK, THE CONTRACTOR WILL BE REQUIRED TO CLEAN ADJACENT (OFF-PROJECT) ROADWAYS USED DURING THE COURSE OF CONSTRUCTION
14. CATCH BASIN CONNECTOR PIPES SHALL BE LAID ON A STRAIGHT ALIGNMENT AND SLOPE UNLESS OTHERWISE SPECIFIED. IF BREAKS IN ALIGNMENT AND SLOPE ARE NECESSARY TO MEET FIELD CONDITIONS, THE MAXIMUM DEFLECTION SHALL BE 22.5 DEGREES. CONTRACTOR SHALL PROVIDE A PIPE COLLAR PER MAG DETAIL 505 AT EACH DEFLECTION.
15. CONNECTOR PIPES SHALL CONNECT TO CATCH BASINS WALLS AT AN ANGLE NOT TO EXCEED 22.5 DEGREES FROM PERPENDICULAR



PROJECT BENCHMARKS

BRASS CAP IN _____
LOCATION _____
ELEV _____

3			
2			
1			
NO.	REVISION	BY	DATE
 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION	DESIGNED	BY	DATE
	DRAWN		
	CHECKED		
DRAWING NO. G2	GENERAL NOTES INDEX OF SHEETS		SHEET OF 2

LEGEND SHEET

SYMBOLS		SYMBOLS		LINESTYLES		LINESTYLES	
	Brass Cap In Hand Hole		Flow Direction		Centerline		Existing Retaining Wall
	Benchmark		Proposed Concrete Sidewalk or O&M Road		Cut Line		Existing Edge Of Paved Road
	Brass Cap		Soil Cement		Fiber Optic Line		Existing ROW
	Bush				Fill Line		Existing Sanitary Sewer Line
	Cactus				Forest/Indian Reservation Line		Existing Storm Drain Pipe And Size
	Catch Basin				High Pressure Gas Line		Existing Underground Power Line
	Chiseled Square				Irrigation Line		Existing Underground Telephone Line
	Miscellaneous Control Point				Proposed Chain Link Fence Line		Existing Underground Cable Television Line
	Check Shot				Proposed Fence Line		Existing Water Line And Size
	Electric Manhole				Proposed Gas Line		Existing Wood Fence Line
	Electric Meter				Proposed Overhead Power Line		
	Elevation Reference Mark				Proposed Overhead Telephone Line		
	Fire Hydrant				Proposed Retaining Wall		
	GDAC				Proposed ROW		
	Gas Meter				Proposed Sanitary Sewer Line		
	Gas Valve				Proposed Underground Power Line		
	Iron Pipe				Proposed Underground Telephone Line		
	Irrigation Manhole				Proposed Underground Cable Television Line		
	Light Pole				Proposed Water Line		
	Palm Tree				Proposed Wood Fence Line		
	Power Pole				Proposed Storm Drain (width varies 72" pipe shown)		
	Rebar				Section Line		
	Rebar With Cap				Temporary Construction Easement		
	Section Corner				Tree Line		
	Storm Drain Manhole				Wash Flow Line		
	Proposed Slope Indicator				Existing Water Surface Elevation (Profile Views Only)		
	Existing Slope Indicator				Proposed Water Surface Elevation (Profile Views Only)		
	Sanitary Sewer Manhole				Existing Block Wall		
	Telephone Manhole				Existing Chain Link Fence Line		
	Telephone Pole				Existing Fence Line		
	Tree				Existing Gas Line And Size		
	Transmission Tower				Existing Left Guardrail		
	Well				Existing Right Guardrail		
	Water Manhole				Existing Irrigation Line		
	Water Meter				Existing Overhead Electric Line		
	Water Valve				Existing Overhead Telephone Line		

3

2

1

NO.

REVISION

BY

DATE



**FLOOD CONTROL DISTRICT
OF MARICOPA COUNTY
ENGINEERING DIVISION**

PROJECT NAME

PROJECT NUMBER

CONTRACT NUMBER

PRELIMINARY
NOT FOR
CONSTRUCTION

DESIGNED

DRAWN

CHECKED

BY


DATE

DRAWING NO.
G3

LEGEND SHEET
SYMBOLS AND LINESTYLES

SHEET OF
3

Example of PL-FCD.dgn; as downloaded

3			
2			
1			
NO.	REVISION	BY	DATE
<div>FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION</div>			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.			SHEET OF

Example of PP-FCD.dgn; as downloaded

☐


 REMOVE

☐

☐

 CONSTRUCT

☐

3			
2			
1			
NO.	REVISION	BY	DATE
<div> FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION</div>			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	PLAN AND PROFILE		SHEET OF

Example of PP-FCD60.dgn; as downloaded

☐


 REMOVE

☐

☐

 CONSTRUCT


☐

3			
2			
1			
NO.	REVISION	BY	DATE
<div> FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION</div>			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	PLAN AND PROFILE		SHEET OF


Example of PP-FCD40.dgn; as downloaded

☐ REMOVE ☐

☐ CONSTRUCT ☐

3			
2			
1			
NO.	REVISION	BY	DATE
<div> FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION</div>			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	PLAN AND PROFILE		SHEET OF

Example of PR-FCD.dgn, as downloaded


3			
2			
1			
NO.	REVISION	BY	DATE
 FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	PLAN AND PROFILE		SHEET OF

ALTERNATE PIPE MATERIALS

[illegible][illegible]


MAIN LINE PIPE

1. ONLY PIPE MATERIAL SPECIFIED ON THIS SHEET ARE ACCEPTABLE FOR THIS PROJECT.
2. WHERE MAXIMUM TRENCH WIDTH IS NOTED AS "UNRESTRICTED" . PIPE STRENGTHS ARE SPECIFIED FOR A POSITIVE PROJECTING OR EMBANKMENT LOADING CONDITION.TRENCH WIDTH RESTRICTIONS FOR THE CAST IN PLACE CONCRETE OPERATION,SHALL COMPLY WITH SECTION 620.

3			
2			
1			
NO.	REVISION	BY	DATE
 <div style="text-align: center;"> FLOOD CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION </div>			
<div style="text-align: center;"> PROJECT NAME PROJECT NUMBER CONTRACT NUMBER </div>			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	PIPE SUMMARY SHEET		SHEET OF

PROJECT NAME	
PROJECT LIMITS	

[illegible]

3			
2			
1			
NO.	REVISION	BY	DATE
 FLUOR CONTROL DISTRICT OF MARICOPA COUNTY ENGINEERING DIVISION			
PROJECT NAME PROJECT NUMBER CONTRACT NUMBER			
PRELIMINARY NOT FOR CONSTRUCTION		BY	DATE
	DESIGNED		
	DRAWN		
	CHECKED		
DRAWING NO.	QUANTITY SUMMARY SHEET	SHEET OF	